

Product datasheet for **RG210641**

alpha smooth muscle Actin (ACTA2) (NM_001613) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	alpha smooth muscle Actin (ACTA2) (NM_001613) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	alpha smooth muscle Actin
Synonyms:	ACTSA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210641 representing NM_001613 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTGTGAAGAAGAGGACAGCACTGCCTTGGTGTGTGACAATGGCTCTGGGCTCTGTAAGGCCGGCTTTG
CTGGGGACGATGCTCCCAGGGCTGTTTTCCCATCCATTGTGGGACGTCCCAGACATCAGGGGGTGATGGT
GGGAATGGGACAAAAAGACAGCTACGTGGGTGACGAAGCAGAGCAAAAGAGGAATCCTGACCCTGAAG
TACCCGATAGAACATGGCATCATCACCACCTGGGACGACATGGAAAAGATCTGGCACCCTTTTCTACA
ATGAGCTTCGTGTGCCCTGAAGAGCATCCCACCCTGCTCACGGAGGCACCCCTGAACCCCAAGGCCAA
CCGGGAGAAAATGACTCAAATTATGTTTGAGACTTTCAATGTCCCAGCCATGTATGTGGCTATCCAGGGC
GTGCTGTCTCTATGCCTCTGGACGCACAACCTGGCATCGTGCTGGACTCTGGAGATGGTGTCAACCACA
ATGTCCCATCTATGAGGGCTATGCCTTGCCCATGCCATCATGCGTCTGGATCTGGCTGGCCGAGATCT
CACTGACTACCTCATGAAGATCCTGACTGAGCGTGGCTATTCTTCGTTACTACTGCTGAGCGTGAGATT
GTCCGGGACATCAAGGAGAACTGTGTTATGTAGCTCTGGACTTTGAAAATGAGATGGCCACTGCCGCAT
CCTCATCCTCCCTTGAGAAGAGTTACGAGTTGCCTGATGGGAAGTGATCACCATCGGAAATGAACGTTT
CCGCTGCCAGAGACCCTGTTCCAGCCATCCTTCATCGGGATGGAGTCTGCTGGCATCCATGAAACCACC
TACAACAGCATCATGAAGTGTGATATTGACATCAGGAAGGACCTCTATGCTAACAAATGTCCTATCAGGGG
GCACCACTATGTACCCTGGCATTGCCGACCGAATGCAGAAGGAGATCACGGCCCTAGCACCCAGCACCAT
GAAGATCAAGATCATTGCCCTCCGGAGCGCAAATACTCTGTCTGGATCGGTGGCTCCATCCTGGCCTCT
CTGTCCACCTTCCAGCAGATGTGGATCAGCAAACAGGAATACGATGAAGCCGGCCCTTCCATTGTCCACC
GCAAATGCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG210641 representing NM_001613
 Red=Cloning site Green=Tags(s)

MCEEEDSTALVCDNGSGLCKAGFAGDDAPRAVFPISVGRPRHQVVMGMGQKDSYVGDEAQSQRGILTLK
 YPIEHGIITNWDMEKIWHHSFYNELRVAPEEHPTLLTEAPLNPKANREKMTQIMFETFNPAMYVAIQ
 VLSLYASGRRTTGIVLDSGDGVTHNVPIYEGYALPHAIMRLDLAGRDLTDYLMKILTERGYSFVTTAEREI
 VRDIKEKLCYVALDFENEMATAASSSSLEKSYELPDGQVITIGNERFRCPETLFQPSFIGMESAGIHETT
 YNSIMKCDIDIRKDLYANNVLSGGTTMYPGIADRMQKEITALAPSTMKIKIIAPPERKYSVWIGGSILAS
 LSTFQQMWISKQEYDEAGPSIVHRKCF

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001613

ORF Size: 1131 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_001613.4](#)

RefSeq Size: 1330 bp

RefSeq ORF: 1134 bp

Locus ID: 59

UniProt ID: [P62736](#)

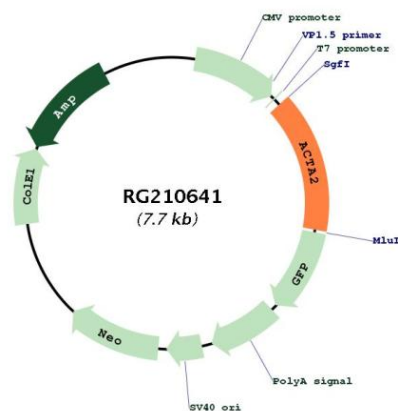
Cytogenetics: 10q23.31

Domains: ACTIN

Protein Pathways: Vascular smooth muscle contraction

Gene Summary: This gene encodes one of six different actin proteins. Actins are highly conserved proteins that are involved in cell motility, structure, integrity, and intercellular signaling. The encoded protein is a smooth muscle actin that is involved in vascular contractility and blood pressure homeostasis. Mutations in this gene cause a variety of vascular diseases, such as thoracic aortic disease, coronary artery disease, stroke, and Moyamoya disease, as well as multisystemic smooth muscle dysfunction syndrome. [provided by RefSeq, Sep 2017]

Product images:



Circular map for RG210641